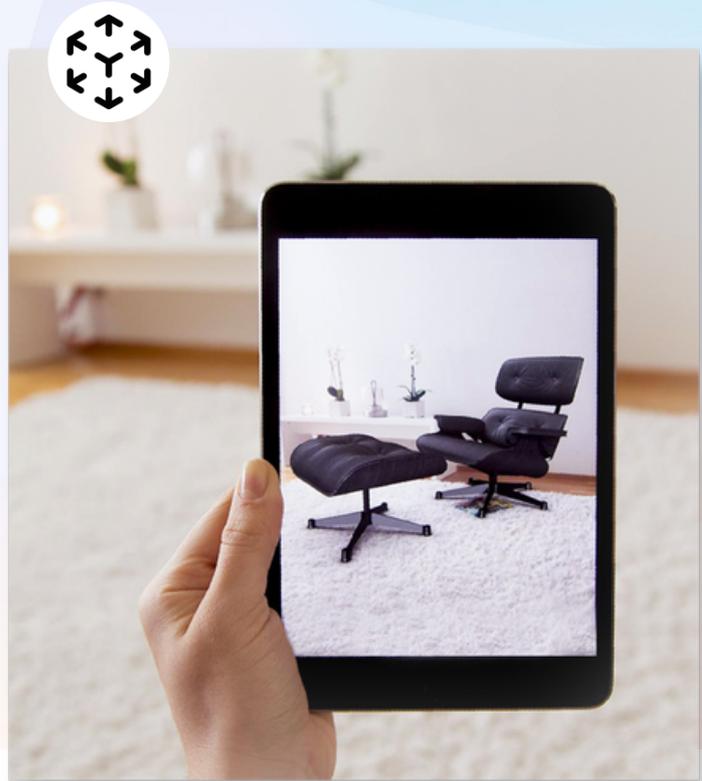


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THE ULTIMATE 3D & AR GUIDE FOR ECOMMERCE

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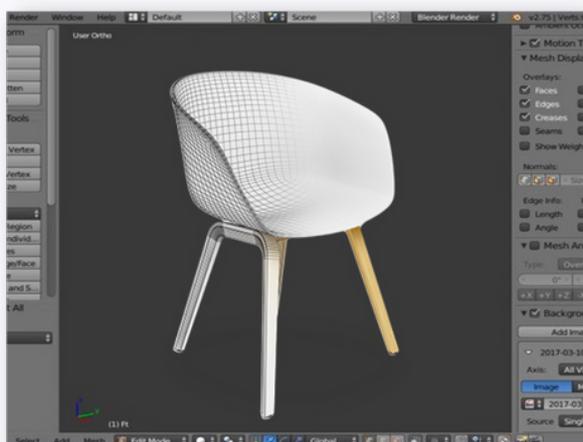
WHY ARE COMPANIES IMPLEMENTING 3D/AR?

3D & Augmented Reality (AR) and Virtual Photography are increasing their presence in eCommerce. The main driver is that consumers love more engaging and realistic product pictures online. These enriched customer experiences lead to more informed buying decisions, leading to more satisfied customers and less need for returns. The Covid-19 pandemic, and massive investments and initiatives led by tech giants such as Apple, Google, and Facebook, are further accelerating the growth and consumer adoption of these visual technologies. In the not-so-distant future - consumers will demand this!

On the next page, we will share the basic definitions of 3D, AR, VTO, and Virtual Photography.



BASIC DEFINITIONS



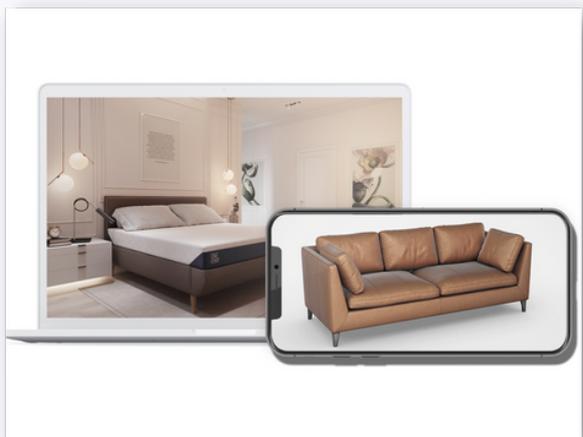
3D MODEL

A three-dimensional individual model, that is a part or whole product that is configured.



AR (AUGMENTED REALITY)

It is displaying your 3D model through your phone, tablet, or computer camera in real space.



VIRTUAL PHOTOGRAPHY

A tool that allows you to create the highest quality render photos from any model on the Sayduck platform.



VTO (VIRTUAL TRY ON)

A type of AR when placing a 3D model through your phone, tablet or computer's camera on your body.

A PORTFOLIO OF 3D MODELS IS A NECESSITY TO GET STARTED, BUT IT'S NOT ENOUGH.

To get the most from these visual technologies, it is vital to know how you could utilize them to benefit your business needs.

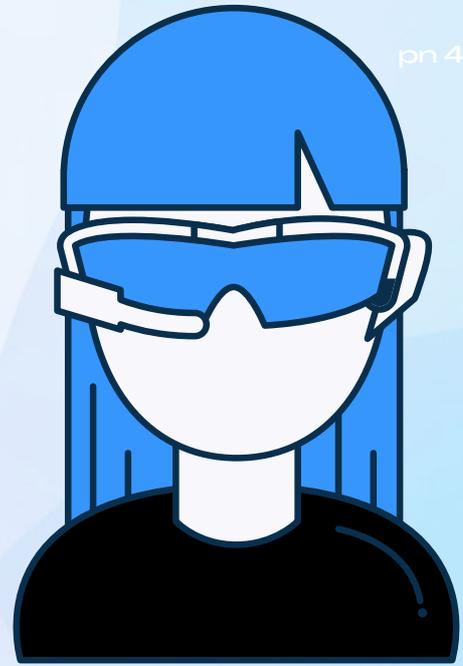


MSI Artymis Monitor

THERE ARE MANY BUSINESS REASONS TO ADOPT 3D AND AR:

- **Place in space or virtually try-on products** – AR allows customers to place furniture in their own homes or even eyewear and style fashion on themselves without setting foot inside a store. This helps to build confidence that purchasing decisions are correct, which boosts conversion.
- **Increased user engagement** – eCommerce can be very boring. Adding a 3D viewer, a configurator, and AR to the mix, makes websites more interactive, engaging, and enjoyable. Consumers will stay longer and in the end buy more products, and return less of them.
- **Catering for mobile shoppers** – 3D works brilliantly with Mobile Commerce (MCommerce). Shoppers browsing on mobile devices appreciate being able to explore every aspect of a product's features in a format that's fast and easy to use - exactly what a 3D viewer provides. And, AR is just one click/tap away.
- **Small companies can be pioneers** and gain competitive advantage – Many of our clients at Sayduck are SMEs. They can dive into the world of 3D and AR at affordable prices.
- **Save money with Virtual Photography** – This is something that 3D provides but few are aware of. With virtual photography, you can take photos of your 3D models and have them automatically rendered and look like real photos. And voilà, you have the photos you need to be able to showcase your product online in 2D. This type of service is easy to use and it saves a lot of money. 3D is in essence solving a product imagery problem that is causing many e-tailers a lot of headaches.

8 AR/3D STATS FOR ECOMMERCE



Do AR and 3D really work? That's a question that can clearly be answered today. Although we are still in the early stages of 3D adoption in enterprises, the data speak for itself. We've listed some key stats and proofings below:

49% FURNITURE RETAILERS SAY THEY'LL OFFER AR IN THE FUTURE

As well as 41% of Furniture Today surveyed retailers are already incorporating augmented reality.

71% OF CONSUMERS SAY THEY SHOP MORE OFTEN WHEN INTERACTING WITH AR

when shoppers interact with products that offer AR experienced.

AR CAN INCREASE CONVERSION RATES BY 94%

According to Shopify's analysis, AR significantly increases shoppers confidence.

IN 2020 AR MARKET WAS VALUED AT USD 14.7 BILLION

And it is projected to reach 88.4 billion by 2026.

ALMOST 90% OF COMPANIES WITH REVENUE OVER 100 MIL ARE LEVERAGING AR/VR TECH

And a poll conducted by Purch revealed that 10% of marketers from SMEs utilise AR and 72% plan to within a year.

AR IS EXPECTED TO GROW BY 31.5% FROM 2021 TO 2026

One of the key growth drivers being growing demand for AR in retail and e-commerce sectors, especially due to Covid-19 and rising investments in AR.

70% OF CONSUMERS 16 TO 44 YEARS OLD ARE AWARE OF AR

when shoppers interact with products that offer AR experienced.

49% OF SHOPPERS WOULD PAY MORE FOR A PRODUCT THEY COULD TRY IN AR

And 72% said they have purchased an item they didn't plan due to AR.

KILLER 3D FEATURES IN ECOMMERCE

01. 3D VIEWER / CONFIGURATOR & KEY FEATURES

A 3D Viewer is a place where your 3D models are displayed and can be interacted with. Embedding Sayduck's 3D viewer onto your site is as simple as adding a Youtube video to your website.

The 3D Viewer and Configurator allow you to:

- have a feel for the product
- rotate it
- zoom in and out
- check measurements
- snap a photo of the product
- and get the feeling that you are checking out a physical product.

With the configurator you can also change:

- colors
- materials
- sizes
- and learn more about the product through annotations.

The 3D viewer can also be enriched with animations and lots of other features that can be easily customized to fit in with any website, brand, and target audience.

The Visual Configurator is a transformative feature for eCommerce - it allows your customers to personalize a product to their

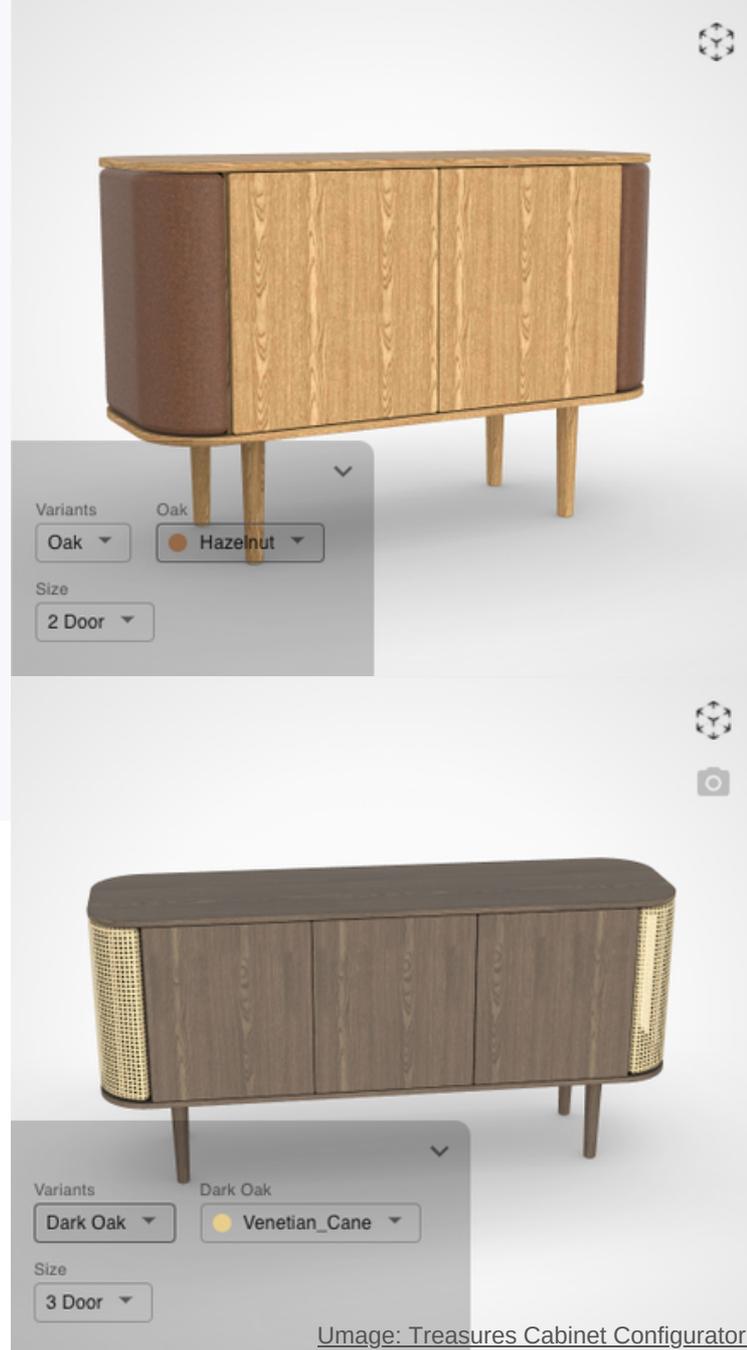


Image: Treasures Cabinet Configurator

specifications and view it from any angle in real-time, creating a special shopping experience.

3D configurators can also provide dynamic pricing for chosen configurations and, when integrated with Shopify or other eCommerce platforms, check if a certain product configuration is currently in stock. 3D configurators are truly supercharging eCommerce.

3D Viewers and Configurators are typically supported by most browsers on mobile and desktop and come with responsive design - so no need to worry about that.

02.

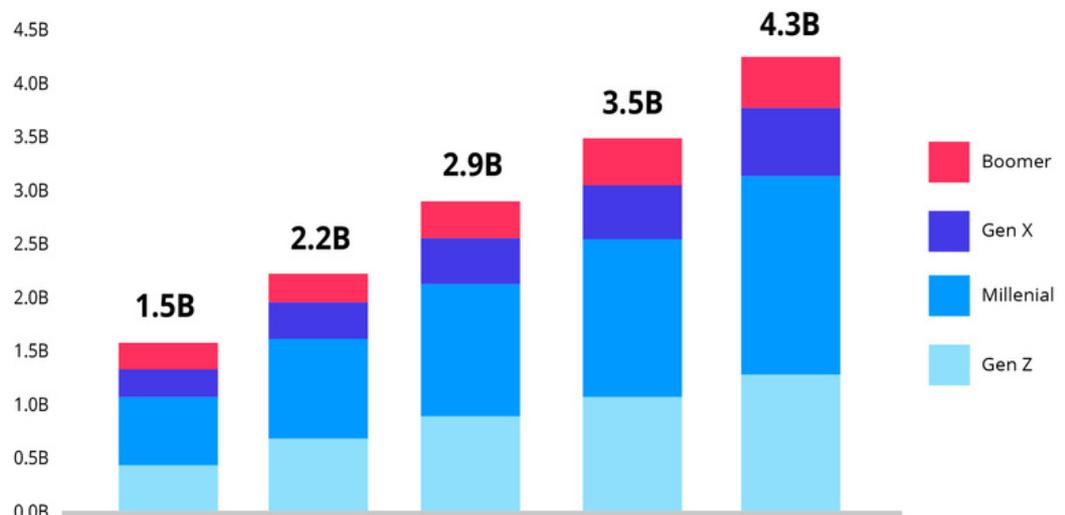
AR (WebAR)

WebAR is rapidly moving from a nice-to-have feature to a must for online businesses. By 2025 it is expected that nearly 75% of the global population (ages 13-69) will be frequent AR users. The consumers of tomorrow want an interactive shopping experience, in which they can explore, validate and make informed buying decisions, without leaving their couch.

Frequent AR Consumers

Based on people ages 13-69 who use social / communication apps

*Snap Consumer AR Global Report 2021
Deloitte Digital*



AR IS BRIDGING THE SHOPPER "IMAGINATION GAP"

AR is bridging the shoppers' "imagination gap", letting them make informed purchasing decisions and as such, significantly reducing returns.

Various companies have been successfully utilizing AR to gain a competitive advantage in the past years:

1. After implementing in-store VR furniture visualization, Macy's reduced their return rate to only 2% and had a 45% increase in purchase sizes.
2. IKEA Place is the second-most popular free app built on Apple's ARKit.

3. Interior company Build.com reported their return rate has decreased by 22% from AR-guide purchases

4. The day eyewear company Warby Parker released their AR feature, their app had historical record downloads, with a 4.9 rating on the App Store.

In the end, it is all about trying out products in real-time just as you would in a store. But with a smartphone or computer and placing the product in a context, which sometimes might not be possible in a physical store.

PLACE IN SPACE:

Visualize a product in your room. Does this sofa look nice together with my current interior? Does it really fit? With one tap, that sofa can appear in your room, letting you see for yourself.

With the help of 3D and AR, shoppers can try every possible material, size, and color in order to find the ideal match. Large, as well as highly customizable product manufacturers and retailers have

been especially benefiting from this technology.

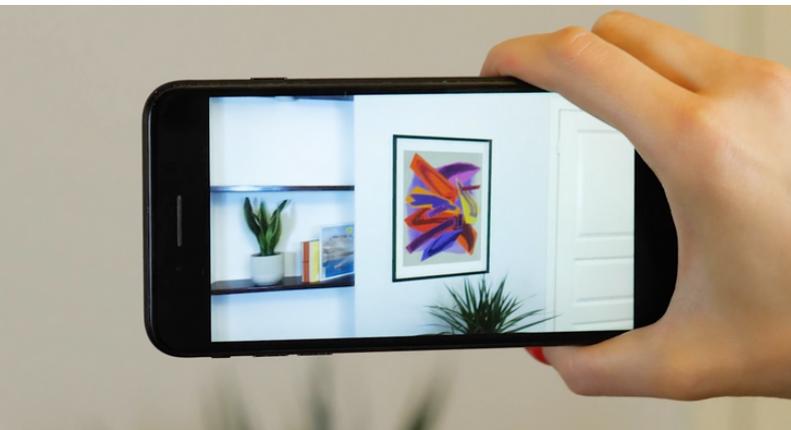
Returns are a \$550 billion problem, and the larger the product, the higher the cost of returns becomes. AR is one cost-efficient way to reduce this problem. **Shopify has recorded a 40% decrease in returns from retailers using 3D visualization.**



MSI: MAG CH130 I REPEL TEK FABRIC Chair



Part&Whole: Total Sofa



Works by Friends: Untitled #1 Art Print By Shane Walsh



Audionord: Geneva Speaker

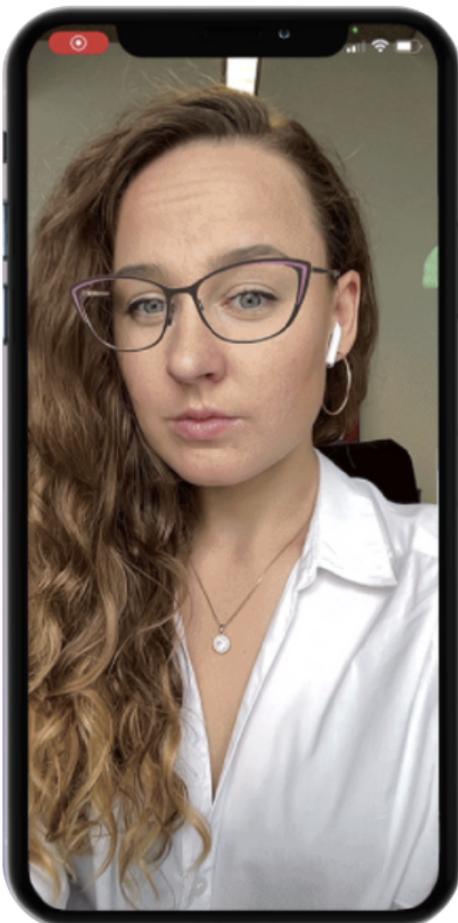
PLACE ON FACE:

This is what many define as a VTO (virtual try-on). VTO allows you to try various products out on your face or body with your camera. Currently, VTOs are best utilized for eyewear, headphones, helmets, footwear, makeup, and other similar products. Basically, anything that you would try on your head, face, and feet.

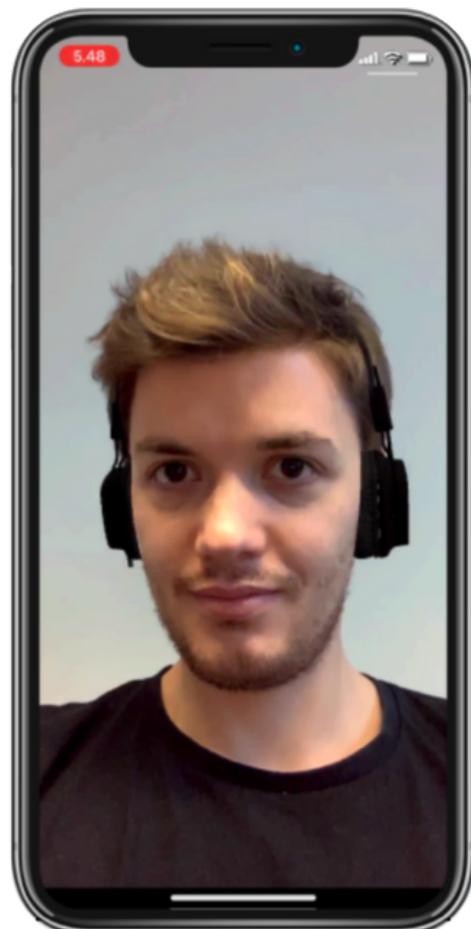
The technology in this area has developed rapidly. Nowadays, VTOs based on faces can achieve results that are almost indistinguishable from real life. Footwear virtual-try-ons have made huge leaps forward in the past years, with players such as Adidas, Nike and JD stepping in.

However, when it comes to clothing VTOs, the current state of technology isn't quite there yet. While already achievable, the results for clothing try-ons are usually not realistic enough. They require a lot of manual input from consumers, or use computer-generated preset models, on which you can see the flow of the garment, on various body proportions, but not on self.

Yet, with companies such as Facebook, trying to create VTOs possible even from ads and Snapchat acquiring online clothing fitting company Fit Analytics, we could expect to have the fashion industry moving to VTOs within the next few years.



OGI Glasses VTO



Headphones VTO

03. VIRTUAL PHOTOGRAPHY

Virtual photography, otherwise known as **photorealistic renders**, uses 3D models, instead of a traditional photo studio and a photographer, to create stunning product visuals, that can be used on websites, social media, and other digital or printed mediums.



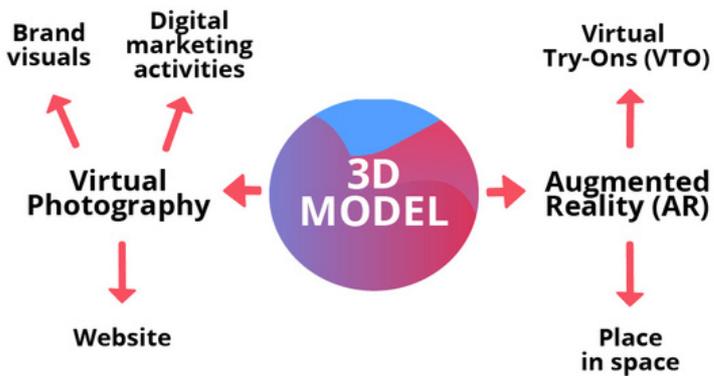
With the surge of online shopping, the value of high-quality digital content in marketing and sales has significantly increased. Yet the problem remains - the larger the product, or higher the customization it offers, the harder it becomes to photograph the product. The problem can often be solved by using 3D models. On average, it is estimated that 3D models can be up to six times cheaper than traditional photography, with guaranteed results.

Based on your 3D models, you can use virtual photography to snap whitespace render from any angle, and in seconds have a perfect image of your product in any size or color that is available.

Professional 3D modelers can also relatively cheaply create lifestyle scenes, and place your product in any desired destination, to fit your brand and lifestyle.

HOW IS 3D MADE?

The 3D creation process might seem complicated at first sight if you are not tech-savvy. However, the process has become easier and cheaper every year, while the quality has improved significantly.



3D model is the key piece for interactive shopping experience

A 3D model is that one piece that allows you to showcase your product in 3D on the web using our software, trying it out in AR, playing with VTOs, and creating promotional materials in our Virtual Photography studio.

To display a product in 3D or AR you need to create a 3D model of it. There are two ways to do this.

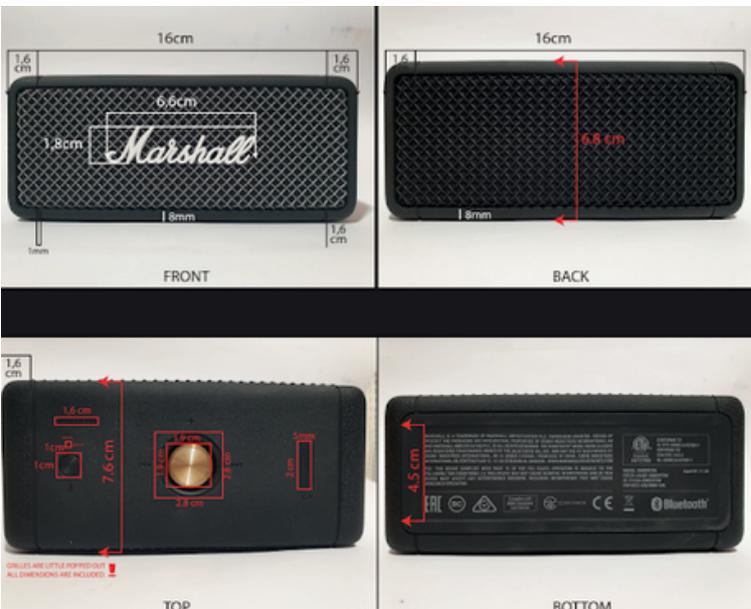
Photogrammetry: take several photos of your product, that are analyzed through photogrammetry software, and it generates a 3D model.

When done correctly, it produces high-quality models, though they are often very large files, which limits their uses.

Currently, photogrammetry is most useful for organic products, such as food.

Building a 3D model from scratch: use a 3D modeler to create a model based on reference materials (a physical product, product images, dimensions, or CAD files).

Currently, 9 times out of 10 this is the best choice for most companies as it provides models that are almost indistinguishable from reality. They are light in file sizes and ready to be used on any website through the Sayduck platform.



Measurements, CAD files, photos, real product all can help in creating accurate 3D model



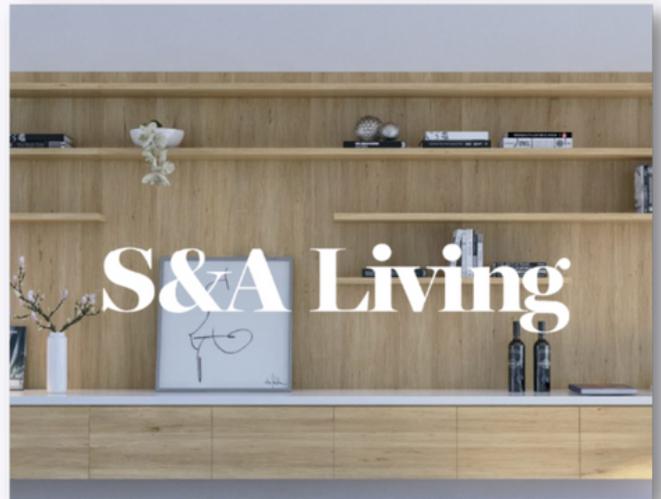
For more information about how to create your 3D model and more about reference materials, please have a click [here](#) or [reach out to us](#). We want to help!

CASE STUDIES



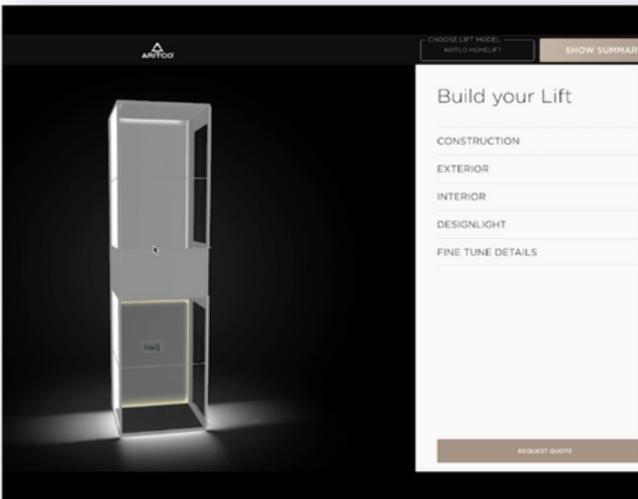
PART & WHOLE / FURNITURE

Showcase the high customizability of modular furniture and give shoppers higher control of their design and shopping experience.



S&A LIVING / FURNITURE

"Our new product range is a modular system, and one of the biggest problems we've always had is having customers see how things are going to look at home."



ARITCO / ELEVATORS

3D Configurator and WebAR implementation for Aritco, a manufacturer of premium lifts.

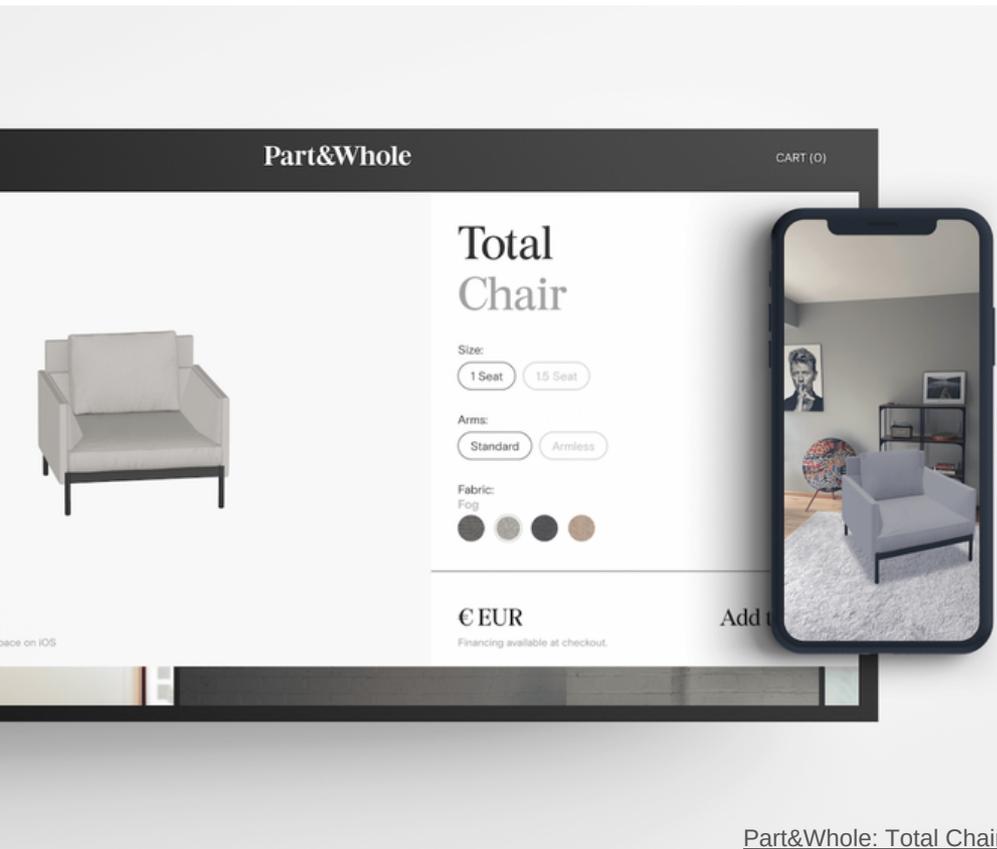


BRONI&BO / ACCESSORIES

WebAR and Virtual Try-On solutions for the accessories retailer Broni&Bo.

01. PART&WHOLE CASE STUDY

Part & Whole has partnered with Sayduck to better showcase the high customizability of their furniture through one of the fastest in-the-market product configurators, and give their buyers higher control of their design and shopping experience.



“Our debut product Total is actually an open ended system, utilizing shared components that can be built in an endless variety of configurations. We needed to be able to communicate this flexibility in a simple and impactful way, without overwhelming first time customers with too much information.”

-Part & Whole, Partner, Guy Ferguson

About Part & Whole

A contemporary furniture company from Victoria, Canada, creating modern, highly customizable, and functional furniture to last through time. Part & Whole wanted to ease the customization process for their shoppers, allowing them to add or remove seats and arms, and be able to see how each option would fit in their homes.

Adapting to the internet era of shopping, and hastened with the emerging

pandemic, Part & Whole has shifted its focus to eCommerce. However, with it came the issue of increased returns, because shoppers were unable to visualize how the furniture would fit into their space.

For this reason Part & Whole brought their furniture customization into 3D, straight onto their website, allowing buyers to fit the furniture in their homes and offices through Augmented Reality.

“Selling large, physical products primarily through an eCommerce platform presents many challenges. We have tried to create an immersive and dynamic digital experience for our customers to break down as many of those barriers as possible. Tools like the configurator and AR help us provide an alternative to the traditional showroom model of selling furniture. In some cases we believe these assets actually improve upon the shopping experience by providing a new level of detail and personalization.”

-Part & Whole, Partner, Guy Ferguson

Challenge

- Producing 3 configurable sofas and armchairs with variations in size, armrest, and fabric
- Needed a custom configurator that could seamlessly integrate into their eCommerce website and fit the brand look

Part & Whole needed a configurator that would effortlessly integrate into their eCommerce website. One that would create a flowing shopping experience, with their 3D models replicating the real products to the smallest detail, and give the real and immersive AR experience when testing out the furniture at home.

The result

In order to create an exceptional furniture shopping experience for Part & Whole

customers, we made sure to create 3D furniture models that would mimic the live sofas and armchairs to the nail. We have also, through custom API integration, created a custom picker for configuring Part & Whole furniture to fit the website layout.

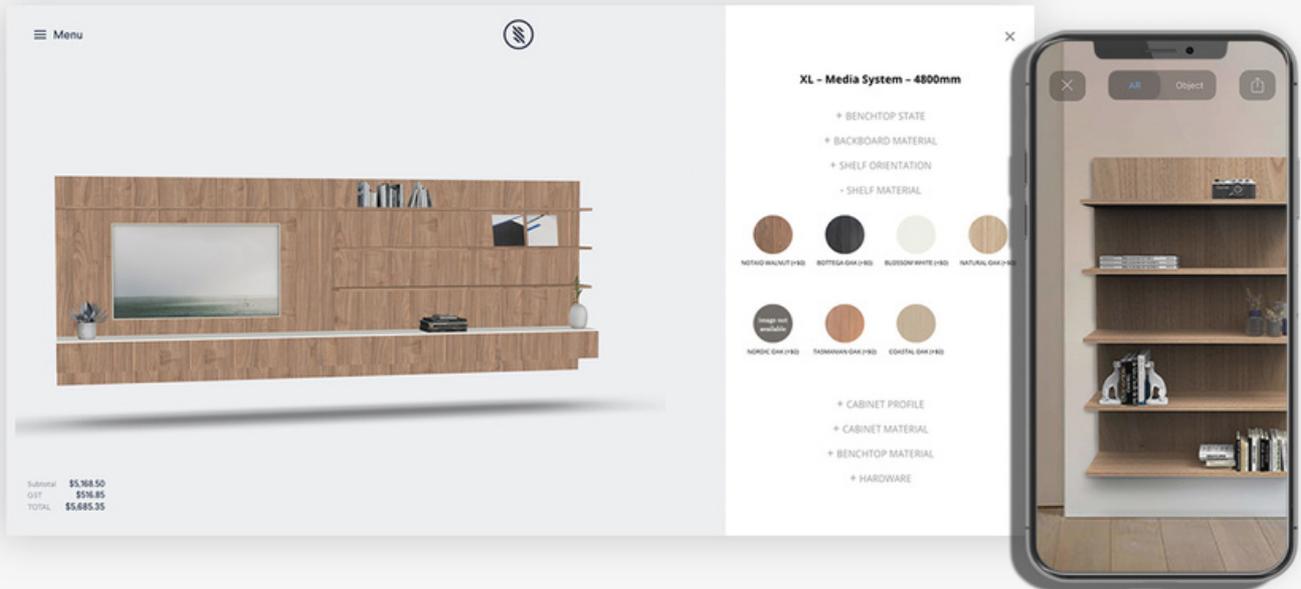
Their development team worked on creating a specific style of UI in order to adapt it to their brand look and feel.

Our modelers made sure to provide Part & Whole with the models to meet their exact needs. Then, our product team assisted with embedding the code into the website and gave further coaching on our platform editing capabilities, which allowed Part & Whole to add new fabrics to their sofas and armchair.



02. S&A LIVING CASE STUDY

Talking 3D and Configurable products with S&A Living



S&A Living: [George entertainment system](#) (left) and [Isabella bookshelf](#) (right)

*“You guys are excellent to work with; intelligent, proactive, thoughtful, fast.”
– S&A Living, Nicholas Acqueroff*

About S&A Living

Based in Australia, [S&A Living](#) has made home decoration products for almost a century. During this time, S&A Living has become synonymous with consistency, quality, and style.

As times change and visualization technology evolves, new ways to present products emerge. It has been exciting for us to help S&A Living take the first step in utilizing 3D and Augmented Reality.

Giving a perfect understanding of a product, especially in online retail, has always been a challenge. However, nowadays 3D and Augmented Reality (AR) can change the whole game in eCommerce by making it easy and simple to visualize complex products that come in multiple variations and configurations.

“Our new product range for S&A Living is a modular system, and one of the biggest problems we’ve always had is having customers see how things are going to look at home. Sayduck is helping us change our industry – because we’re able to show people pre-modeled products that we’ve put together into ranges. In the past, it’s always been custom from the ground up”
– S&A Living, Nicholas Acqueroff

“In a retail environment, it’s a brilliant solution. We like to sell our products with real and tangible imagery. The Sayduck Platform is an incredible customization tool that allows people to visualize what they are getting. We hope that this means they’ll follow through with their selections, choose a higher value and more sophisticated products”, Nicholas continues.

Having the option to showcase a precise product configuration is a clear advantage and sharing this common vision is a strong validation point for us at Sayduck and confirms why we strongly believe in what we do.

How has it been working with Sayduck?

“Your customer service is exceptional. You guys are intelligent in the way you think

about things, you provide solutions to our problems, you’ve helped us model everything, and you’ve gone outside of your normal scope when we’ve needed it.”

What has the effect of 3D and AR been in your business?

“Our customers find it fascinating and simple. We’ve integrated the Sayduck 3D Configurator with our own pricing module on the front end and implemented a screen reader plugin that reads the value on the components and then adds that value to the price. It’s a great live pricing tool.”

We are proud to help S&A Living take its first steps into showcasing its products in 3D and Augmented Reality and look forward to sharing more similar stories with you in the future.

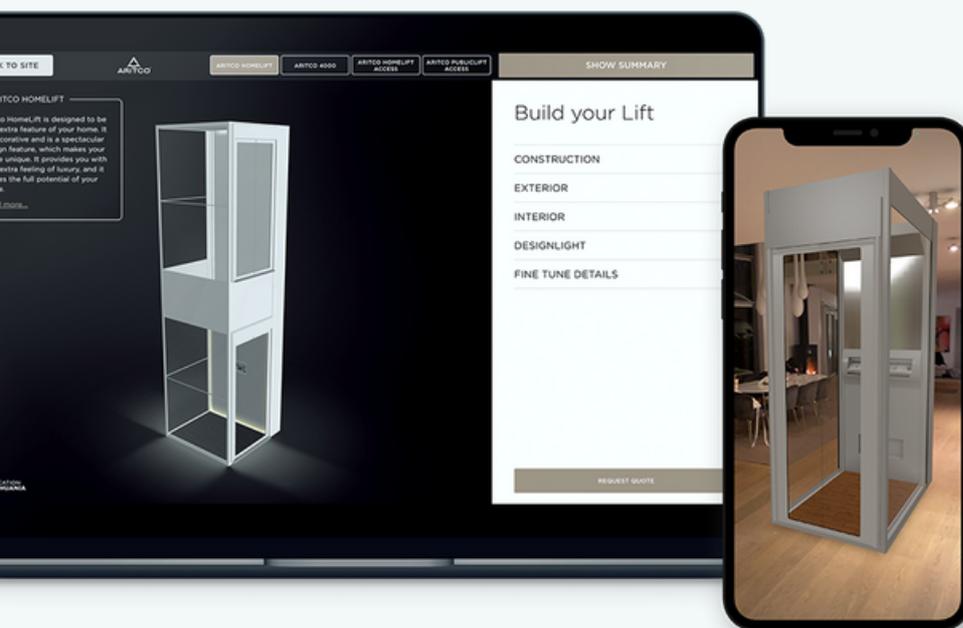


[CHECK OUT S&A LIVING CONFIGURATOR](#)

03. ARITCO CASE STUDY

3D Configurator and WebAR implementation for a premium lifts manufacturer Aritco

The recent global situation has permanently changed both B2C and B2B business strategies. Customers have learned the value of understanding products without being able to see or touch them, and now expect brands to create online shopping experiences that are both informative, engaging, and personally relevant. Although it might sound like a tough task to do, it is actually easy to achieve with product visualization in 3D and WebAR.



[Aritco Homelift 3D configurator](#) on desktop and WebAR on a mobile device

Aritco stands for engineering, quality, and design excellence. All of this demands great tools and premium visualization in digital channels, which is exactly what the Aritco Liftguide configuration provides.
– Niklas Slotte, CEO of Sayduck.

About Aritco

Aritco is an award-winning manufacturer of platform lifts and home lifts. The company supplies lifts to public and private markets all over the world. Today, almost 4,000 lifts are produced per year and sold in 40 different countries through more than 170 distributors.

The Case & Solution

A great example that reflects our passion for a better online shopping experience, is our collaboration with Aritco. To keep up with the pace of inevitable digitalization, Aritco decided to go with interactive product visualization in 3D and AR. The main task was to visualize Aritco's

We looked forward to developing this 3D and AR solution in collaboration with Vobling & Sayduck. It gives our customers and partners around the world the opportunity to tailor and visualize our lifts in their intended environment. By broadening our range of digital services, we continue to be one of the leading players in our industry.
– Klas Dybeck, CIO/CDO at Aritco Lift AB.



three main lifts in 3D with the ability to configure each of them and view the final chosen product in AR.

Now Aritco's customers are able to choose the type of lift, the number of floors, height, location of doors/windows, choice of material, lighting, and more, according to their wishes. Once the customer is happy with the customized lift that is visually presented to them, the WebAR function comes next. With only one click on a mobile device, the customer can try the lift in their own environment, have a look at the details, move it around and see if it actually fits.

This dynamic 3D and AR implementation makes it easier to engage with the product almost as in-store, while still staying safely at home or in the product's natural environment.

The implementation of 3D and WebAR not only drives more sustainable purchases, as it reduces the possibility of returns, but also a **3D configurator technology is proven to drive at least a 10 percent increase in sales/conversions over traditional methods.** Additionally, it has also provided a competitive advantage over similar brands for Aritco.

LEARN MORE ABOUT ARITCO'S CASE STUDY

04. BRONI&BO INTERVIEW

WebAR and Virtual Try-On solutions for the accessories retailer Broni&Bo

We all testify how the world is currently changing in every sphere, including eCommerce. Businesses are facing many challenges and have to look for solutions to adapt and survive during this time. One of them is to find ways how to provide a better customer journey, as customers are shopping online without leaving their homes.



Broni&Bo knitted ties in webAR

*Helping to reduce the impact of shipping and returns helps us play a small part in reducing the impact on the environment.
– Matthew Boulding, the owner of Broni&Bo*

About Broni&Bo

We have always been all about finding the best solutions for each and every one of our customers according to their product, main problem, and vision. Broni&Bo was the first customer for whom we built the unique possibility to experience bow ties in Augmented Reality and also with the Virtual Try-On feature. This allows the customers to virtually fit the products while staying at home and using only a phone.

We've talked with Matthew Boulding, the owner of Broni&Bo about the WebAR and Virtual-Try-On integration to their company.

Broni&Bo is an accessories label specializing in knitted ties and knitted bow ties. Since 2011, this brand has worked on a range of carefully selected ties and bow ties in a variety of styles and materials for any occasion.

In 2020 Broni&Bo was the first company to launch bow ties using the latest in facial recognition technology. With the Virtual-Try-On implementation, Broni&Bo now offers their customers a unique opportunity to try their products from home, or wherever they may be.

The true benefit of augmented reality is the potential to provide an immersive shopping experience that empowers customers to remotely explore every inch, every part, and every angle of a product, without having to purchase it first.

– Matthew Boulding, the owner of Broni&Bo

1. How did you first come up with the idea to add 3D and Augmented Reality features to your products?

We work in a very saturated market and there is no way to get away from that in regards to our products. There are so many businesses out there offering similar products to ours which means competition is tough. Our aim has always been to differentiate ourselves from the competition by becoming a specialist in our area and delivering a higher level of service, from customer support to our bespoke color-matching service. Initially, we saw immersive technology as a great way to enhance our service to customers that went beyond our current proposition. It also allows us to share this service with our retail clients who can easily add these to their websites.

2. What were the reasons you decided to add a virtual-try-on feature to some of your knitted bow ties?

The true benefit of augmented reality is the potential to provide an immersive shopping experience that empowers customers to remotely explore every inch, every part, and every angle of a product, without having to purchase it first. At Broni&Bo we launched augmented reality to do just that, and offer our customers a closer look at our knitted ties and bow ties, which is impossible to do from traditional product photography.

One of our key goals in implementing virtual-try-on was to help make buying our products easier, specifically for the wedding market. We know that choosing a color scheme for a wedding is one of the first and biggest decisions that is made by a couple and helps set the tone and vibe for the big day.

We have worked with a lot of happy couples but we noticed that they would buy 3-4 different colors, try them on and then return the colors they didn't want and then order the rest.

We saw virtual try on's as an opportunity to meet the needs of the groom and his



groomsmen. They could virtually try on our extensive range of colors without the need to actually buy a range of our bow ties to try on and then need to return. It also provides the ability to virtually try the products on in the comfort of their own home, where ever in the world they may be or, more particularly, in stores that sell suits but not necessarily the wide range of the products they need.

Another key factor was overseas customers. Whilst we have sold our accessories in over 36 countries, we felt that the potential overseas customer may be less willing to buy from us because of the cost of shipping and return just to test the color. If the color or style isn't right, using AR can help avoid

3. Have you worried about anything before deciding to go with 3D & AR?

I know that 3D and AR isn't universal across all devices and platforms so there was and is a worry that usability isn't going to be as high as it could be. Shopify, our eCommerce platform of choice has always been forward thinking when it comes to integrating new technology in to it's platform but at the moment there isn't anything in regards to reality files that can be easily added to the site as they have done with USDZ files so we have found a work around for now.

As a very small business owner and limited in-house technology (ie. What I know) we will be limited to what Shopify can offer in regards to integration. Hopefully it's on their agenda soon.

Whilst we have sold our accessories in over 36 countries, we felt that that the potential overseas customer may be less willing to buy from us because of the cost of shipping and return just to test the colour.

– Matthew Boulding, the owner of Broni&Bo

the hassle of purchasing, trying, and returning or exchanging. Shipping and returns were and still are creating unnecessary costs both for us and the customer, something we want to try and minimize with virtual-try-on. Helping to reduce the impact of shipping and returns helps us play a small part in reducing the impact on the environment.

We had no other real issues as of yet but UX will always play a key factor in adoption and usage.

4. Have you noticed any improvements in your business after implementing 3D & AR on your website?

We didn't do a large launch with this service simply because of the times that we are in. Whilst this would be a perfect time to launch in regards to people not being able to visit stores we know that our key demographic isn't purchasing at the moment and business has been tough.

We hope that as things start to pick up with the wedding industry we will start to see the impact of this new experience and a way of shopping driving our business forward.

5. How do you see the future of 3D & AR in the eCommerce industry?

I think that people and businesses will be reticent to adopt AR in the coming year but as customer adoption starts to become the norm we will start to see a huge shift in demand for AR.

From a fashion point of view, we are lucky that our products can easily be tried on using your phone in your hand. This isn't as easy to, say, our ties because of the varying length of people and our ties. There will need to be a shift in the technology that we use that will allow other businesses to adopt this. Who knows, we may see a new IKEA mirror that links directly to a website and you can try on various brands and order at the touch of a button.

You can learn more about Broni&Bo virtual try-on case study as well as other case studies by visiting our [website](#) or [subscribing to our newsletter!](#)

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For inquiries about Sayduck contact:

Donatas Padvelskis
Head of Operations, Sayduck
donatas@sayduck.com

Or book a meeting with us [HERE.](#)

LET'S TALK

sayduck.com
info@sayduck.com